Requested Data for the Western North Carolina Duke Energy Progress region

This updated Energy Innovation Task Force (EITF) data request reflects revisions and refinements identified during the introductory EITF data needs meeting with Duke Energy staff on September 29th, 2016. In the spirit of that productive first meeting, EITF members are happy to discuss the data requested here and how it will shape the EITF's work and work products.

EITF members recognize that the data needs described below may not perfectly align with Duke Energy's data availability, and are also open to discussing alternative avenues to providing the data.

As the EITF members better gain a better understanding of Duke Energy's methodologies and data, there may be additional updates and refinements to this request to reflect new information and address data limitations that may exist.

	Data request item	Notes	Needs Duke support, or available from other sources?	Data requested?
1.	**Regional territory information**			
	a. Geographic description and/ or maps of the Western-North Carolina (WNC) region that clarifies:			
	i. How WNC boundaries relate to the boundaries of the Duke Energy Progress (DEP) West balancing authority		Duke Support	Requested
	ii. Which counties or portions of counties are within the WNC service territory boundaries		Duke Support	Requested
	iii. How the DEP West balancing authority and adjacent counties in Duke Energy Carolinas service territory (such as Henderson County) interact.		Duke Support	Requested

2. **Generation sources** in DEP's WNC region (2010-2015)

✔	a. Company owned assets, by fuel source, capacity (MW), annual generation (MWh) and summer/winter capacity available to meet peak demand (MW).	*This data is available from the DEP Integrated Resource Plan (IRP) along with the Energy Information Administration.*	Other Sources	Fulfilled
✔	b. Annual imports of energy and capacity	*This data is available from the DEP IRP.*	Other Sources	Fulfilled
	c. Independent Power Producer assets (including PURPA contracts), by fuel source, capacity (MW), annual generation (MWh).	*This data is available from the Energy Information Administration.*	Other Sources	Requested
	d. Independent Power Producer assets (including PURPA contracts) summer/winter capacity available to meet peak demand (MW).		Duke Support	Requested
	e. Grid-interconnected, customer owned assets, by fuel source, capacity (MW), estimated annual generation and summer/winter capacity available to meet peak demand (MW).		Duke Support	Requested

3. **Transmission capacity & constraints** for DEP's WNC region (2010-2019)

a. Transmission capacity and constraints for DEP's WNC region for 2010-2019.	*DEP staff has provided helpful clarifications on how NERC requirements translate into transmission capacity constraints for capacity planning purposes. DEP has provided updated data showing the capacity constraints and required reserves for 2020 through 2030. This data addresses the EITF data need from 2020-2030.*	Duke Support	Requested

4. **System demand profile data** for DEP's WNC region (at least 2 historical years, ideally 5 years)

a. Hourly demand profiles for a week under "peak planning" weather conditions for both the WNC region and also for all retail customer classes and wholesale customers in the WNC region by county.		Duke Support	Requested
b. One or more full years of hourly (8760) demand by retail customer classes and wholesale customers in the WNC region.		Duke Support	Requested
c. Monthly total energy requirements for the WNC region [MWh].	*This data is only needed for years that are not included in the above data item. This monthly total of WNC region system requirements represents the sum of generation in the WNC region plus net imports. This value less sales would equal losses plus any DEP use in the WNC region.*	Duke Support	Requested

5. Retail and Wholesale (EMCs and municipals) in DEP's WNC region (aggregated by 1) WNC region, 2) Buncombe County, 3) City of Asheville and ideally 4) neighborhoods within Asheville)**:**

	EITF members recognize that planning data is likely at a different level of granularity than actual aggregations of customer data may be. The more granular the load data is, the more effective and targeted the solutions developed by the EITF will be. That said, current EITF efforts need WNC regional data as a starting point, and their work can be refined as more granular data become available.		

a. Number of retail customers by customer class and number of wholesale customers (2010-2015)		Duke Support	Requested
b. Monthly energy sales [kWh] for retail customers by class and for wholesale customers (2010-2015)		Duke Support	Requested
c. Monthly peak hourly demand, coincident with WNC region demand, by customer class for retail customers and for wholesale customers (2010-15)		Duke Support	Requested
d. Available information/studies about load shapes of end use consumption by retail customer class for retail customers and for wholesale customers			
i. End uses approximating as much of customer class/wholesale customer load shapes as possible, including things such as lighting, plug loads, HVAC, etc.		Duke Support	Requested
ii. Any information about the saturation of electric heating in the WNC region, including estimates of the share of electric heating between: resistance heat, traditional heat pumps, mini-split heat pumps, geothermal heating, and any other categories of electric heating.		Duke Support	Requested
e. Forecast annual growth values for retail customers by customer class and growth values for wholesale customers for the following (2016-2031):			
i. Energy sales [kWh]		Duke Support	Requested

	ii. Peak hourly demand, coincident with WNC region demand, for both winter and summer [kW]		Duke Support	Requested
	iii. Number of customers		Duke Support	Requested

6. **DSM and EE program information** in the WNC region

	a. Complete list of DSM and EE Programs (2010-2015)			
	i. Any forecasted additions to DSM or EE Programs (2016-2030)		Duke Support	Requested
	b. Energy savings estimates			
	i. Number of DSM/EE program participants in the WNC region by program from 2010-2015 and forecast for 2016-2030.		Duke Support	Requested
	ii. Annual WNC region energy savings [kWh] and peak hourly demand, coincident with WNC region demand, [kW] savings by program from 2010-2015 and forecast for 2016-2030.		Duke Support	Requested
	c. An overview of the program cycle, including:			
✔	i. The process of going from a recommendation for a new program to deploying the program		Duke Support	Fulfilled
✔	ii. The frequency of updating programs		Duke Support	Fulfilled
✔	iii. An overview of the RFP process for selecting implementers		Duke Support	Fulfilled
✔	iv. The steps to initiate a pilot project		Duke Support	Fulfilled
	v. The process for funding a community-based program	*Partially fulfilled, working on better understanding of all the potential sources of funding*	Duke Support	Requested

vi. Existing plans for enhancing program marketing and/or communication		Duke Support	Requested
vii. Description of existing funds or budgets that could be leveraged to refine or expand programs	*Partially fulfilled*	Duke Support	Requested
d. Costs/ budgets by program (2010-2015)			
i. Administrative Costs		Duke Support	Requested
ii. Implementation Costs		Duke Support	Requested
iii. Incentives		Duke Support	Requested
iv. EM&V Costs		Duke Support	Requested
v. Other Utility Costs		Duke Support	Requested

7. **Planning** assumptions

✔	a. Planning requirement for WNC region	*DEP has already provided the necessary data about the planning requirement that defines when and how much need there is for additional capacity.*	Duke Support	Fulfilled
	b. Weather assumptions for planning peak weather conditions.	*These weather assumptions would correspond with the load shape data requested in category number 4.*	Duke Support	Requested
	c. Assumed energy demand drivers (e.g. population growth, load profiles, weather)		Duke Support	Requested
	d. Assumptions for allocating peak demand share for DEP's system to the WNC region.		Duke Support	Requested

8. **Forecasted generation** additions in DEP's WNC region (2016-2030) by fuel source, summer/winter capacity [MW], and summer/winter capacity available to meet peak demand [MW]

✔	a. Forecasted company owned assets, by fuel source, capacity (MW), and summer/winter capacity available to meet peak demand (MW).	*DEP has already provided the necessary data about DEP's planned generation additions in the WNC region from 2016-2030.*	Duke Support	Fulfilled
	b. Forecasted Independent Power Producer assets (including PURPA contracts), by fuel source, capacity (MW), and summer/winter capacity available to meet peak demand (MW).		Duke Support	Requested
	c. Forecasted grid-interconnected, customer owned assets, by fuel source, capacity (MW), and contribution summer/winter peak load reduction (MW).		Duke Support	Requested

9. **Planned transmission** upgrades in DEP's WNC region (2016-2030).

✔	a. Planned transmission upgrades	*DEP has already provided the necessary data about DEP's planned transmission additions in the WNC region from 2016-2030*	Duke Support	Fulfilled

To the extent that DEP maintains any of the following contextual data about the DEP WNC region, the EITF would also benefit from any of the following:

1. Population (Census)
2. Employment by industry sector (Census)
3. Household income (Census)
4. Other economic or industrial drivers
5. Normal heating and cooling degree days